

Tribal Participation In U.S./Canada Pacific Salmon Treaty Implementation

Introduction

Adult salmon returning to most western Washington streams migrate through both U.S. and Canadian waters, and are harvested by fishermen from both countries. For decades, there were no restrictions on the interception of returning salmon by fishermen of neighboring countries. Conservation goals and the right of each nation to reap the benefits of its own fisheries enhancement and restoration efforts were severely undermined as a result.

In 1985, after two decades of discussions, the Pacific Salmon Treaty (PST) was created through the cooperative efforts of the tribes, state governments, U.S. and Canadian governments, and recreational and commercial fishing interests.

The Pacific Salmon Commission (PSC) was created by the United States and Canada to implement the treaty. The PSC establishes fishery and allocation regimes, develops management recommendations and serves as the countries' forum to reach agreement on mutual fisheries issues. The PSC is governed by an eight-member bilateral body that includes representatives of tribal, state and federal governments. Four regional sub-panels composed of fisheries policy and technical representatives advise the PSC.

As co-managers of the fishery resources in western Washington, tribal implementation of the PST is critical to achieve the shared goals of the PST in protecting, sharing and restoring salmon resources. In addition to serving at the policy level on the PSC and its panels, tribal representatives also participate on the many committees and work groups which provide technical support to implement the treaty.

Policy And Process

Successful implementation of the PST requires the tribes to develop, whenever possible, a unified position on issues addressed by the PSC. The treaty provides for tribal policy representation at all levels of the PSC structure. The tribes take full advantage, as demonstrated by the participation of their representatives in this process. Another essential aspect of the tribes' role in the treaty's



Quinault Indian Nation fisheries personnel take samples from returning Queets River wild fall chinook as part of a Pacific Salmon Treaty study.

implementation is to ensure that key tribal and Northwest Indian Fisheries Commission (NWIFC) technical staff are involved in the complete operation of the PSC.

NWIFC staff facilitate inter-tribal and inter-agency meetings, develop issue papers and analysis of strategies and negotiation options, and provide technical advice to the tribes and tribal PSC representatives. An extensive amount of time is devoted to ensure the tribes and their policy representatives are informed on the issues affected by the PST implementation process.

An NWIFC policy analyst serves as the "shadow" for PSC Commissioner Wm. "Ron" Allen, assisting him with policy issues pertaining to the PSC process. The policy analyst also prepares meeting announcements, briefing reports on key issues and other materials to keep concerned tribes informed.

In 1999, after several months of government-to-government discussions, a comprehensive, long-term fisheries management agreement was reached that resolved longstanding disputes relating to the PST and established abundance-based fishing regimes for the major salmon interception fisheries in the U.S. and Canada. The new 10-year agreement, which builds on the original 1985 treaty, aims to put conservation first. To that end, the new agreement established a \$140 million U.S. fund to protect and rebuild salmon spawning grounds. There is also a redistribution of quotas. The U.S. percentage of the valuable Fraser River sockeye will eventually be reduced, while Canada agreed to a reduction in harvest on weaker stocks of chinook and coho, allowing more of those fish to return to Washington and Oregon rivers. This new agreement offers a solid foundation upon which recovery of weak salmon stocks can be built.

Ensuring sustainable salmon harvest levels is the goal of the management agreement, which works to protect many of the West Coast salmon species listed as threatened under the federal Endangered Species Act. Strict harvest controls designed to protect weak salmon stocks are at the heart of the agreement, which includes a commitment by the two countries to identify habitat concerns affecting salmon.

As part of the agreement, the U.S. will reduce harvest levels of chinook stocks in southern fisheries to sustainable levels on depressed stocks that will ensure optimum production of chinook stocks over time. Coho and chum harvests will be shaped to reflect the conservation-based approach to the agreement. Also, tribes primarily dependent on Fraser River sockeye agreed to additional harvest cuts.

Technical Implementation

NWIFC staff continued in key roles in implementation of the Pacific Salmon Treaty in FY 00 through their involvement on several committees and working groups within the PSC structure. Staff held positions as U.S. chair of the Fraser Panel Technical, and co-chair of the Joint Chum Technical Committee. Staff served on several other committees and working groups, including the chinook Technical Committee, the Selective Fishery Evaluation Committee, the Coho Technical Committee, and the Working Groups on Mark-Recovery Statistics and Data Standards.

Research Projects And Data Gathering Activities

Fisheries research is an integral part of treaty implementation. The tribes have designated a substantial

portion of their PST funding to conduct the necessary research, data collection and fishery monitoring activities needed to manage salmon fisheries in the context of the PST. Following are brief reports on PST activities during FY 00.

Indicator Stock Tagging And Recovery Projects

Hatchery Indicator Stock Tagging and Recovery Program (NWIFC)

This program is responsible for tagging the tribal hatchery salmon stocks that are part of the coastwide PST chinook and coho exploitation indicator stock program. The intent of the program is to ensure that each wild or hatchery production stock grouping has a representative hatchery stock that is being coded wire tagged (CWT). Subsequent tag recovery information allows the PSC chinook and coho technical committees to develop fishery statistics used to monitor and evaluate the impact of fisheries on wild stocks and evaluate rebuilding programs. More than 1.5 million fish from 11 tribal hatcheries are annually tagged for the program. This includes six chinook stocks and eight coho stocks.

Wild Indicator Stock Studies

Four of the chinook tag groups are derived from wild broodstocking efforts. Since wild chinook smolts are too sensitive to capture and tag, the intent is to mark a group that represents wild fish to the best extent possible. In these studies, wild adult chinook spawners are captured and brought into a hatchery for spawning. The subsequent progeny are incubated, reared, and tagged with coded wires. After tagging, the fish are transferred to an imprinting pond adjacent the native river, where the fish are released at a size and time consistent with the wild chinook migration. Indicator stock programs include:

- Skagit River Summer Chinook Indicator Stock Study (Skagit System Cooperative)
- Stillaguamish River Native Chinook Indicator Stock Study (Stillaguamish Tribe)
- Hoko River Fall Chinook Indicator Stock Study (Makah Tribe)
- Queets River Wild Fall Chinook Indicator Stock Study (Quinault Indian Nation)

All of these projects include spawning surveys to estimate escapement and recover CWTs.

One wild coho indicator stock study is conducted by the Quinault Indian Nation. Queets River wild coho smolts are annually captured and tagged to provide an indicator stock of naturally-produced coho salmon from the north Washington coast.

Tribal Projects: Stock Restoration Studies

Skagit River Chinook Restoration Project (Skagit System Cooperative: Upper Skagit, Swinomish and Sauk-Suiattle Tribes)

This project's purpose is to develop an analytical model to evaluate proposed actions to restore Skagit River chinook. The project will facilitate thorough evaluation of harvest, habitat, and hatchery actions to achieve the PST objective of halting chinook declines.

Dungeness Chinook Tagging Project (Jamestown S'Klallam Tribe)

A captive broodstock program was started in 1991 to save Dungeness chinook from extinction. This multi-agency program is an experimental model for critical stock restoration and involves coded wire tagging captive broodstock offspring. Tag data will assist in assessing interception rates in all fisheries, evaluating different release strategies, and determining spawner success.

Natural Production And Habitat Assessment Studies

Puyallup River Smolt Trap (Puyallup Tribe)

The purpose of this study is to evaluate natural chinook production in the Puyallup River system by trapping, examining and releasing outmigrating juvenile chinook salmon. When combined with a similar study under way on the White River, potential for natural chinook production in the entire watershed can be determined.

Natural Production Of Coho Smolts In The Queets River (Quinault Indian Nation)

The overall goal of this project is to bring together habitat and fish production data to guide enhancement actions to improve Queets River coho production. Specific objectives include analyzing habitat and production data from more than 10 years of studies in the Queets River basin; maintaining the long-term database on Queets coho production, and developing analytical tools to direct enhancement efforts in the basin.

Oakland Bay/Hammersley Inlet Coho Production Investigation (Squaxin Island Tribe)

This study evaluates coho production from two southern Puget Sound streams, using weirs and mark/recapture methodology to count outmigrating coho smolts. Data are used to estimate natural coho production, help develop a spawner/recruit relationship, and help refine spawning escapement goals.

Nooksack River Salmon Smolt Production Study (Lummi and Nooksack Tribes)

This project's long-term goal is to quantify Nooksack River natural smolt production. Information will be used to monitor production and assist with harvest management and ESA recovery studies. In 2000 the primary objectives were to determine zero-age chinook production, and collect and process samples for genetic analysis to identify the specific stock production sources in the watershed.

Quillayute River Natural Coho Production Study (Quileute Tribe)

The objective of this project is to monitor and evaluate Quillayute River natural fall coho production in conjunction with ocean and terminal fisheries. Data analysis from this and other projects provide wild escapement estimates, terminal and pre-terminal harvest rates, and spawner-recruit relationships.

Upper Hoh River Watershed Analysis (Hoh Tribe)

The objective of this project is to determine the overall condition of coho habitat in the Hoh River watershed, and the relative distribution and utilization of this habitat. Data will be used to determine habitat vulnerability to different types of physical disturbances and to develop spawner-recruit production functions for Hoh River coho.

Spawning Escapement Evaluation Studies

Snohomish River Chinook Straying Evaluation Study (Tulalip Tribes)

This study is designed to determine the level of straying of hatchery chinook, using unique otolith (ear bone) marks. Spawning ground surveys are conducted through other projects to recover otoliths and determine hatchery/wild components. This helps biologists assess the accuracy of naturally spawning escapement estimates used to monitor the rebuilding of Snohomish River summer/fall native chinook.

East Kitsap Coho Escapement Study (Suquamish Tribe)

Escapement estimates of naturally spawning coho are limited in Southern Puget Sound. This project is designed to improve the accuracy of regional coho escapement estimates, including an estimate of enhanced and naturally spawning components. This will provide important information for determining the potential range of fishery management constraints for wild coho, evaluate the straying of hatchery fish from different rearing strategies, and evaluate the relationship between fishery exploitation rates and net pen straying rates.

Hatchery Chinook Straying in the Nisqually Basin (Nisqually Tribe)

The Nisqually Tribe operates two chinook production facilities that annually produce more than 3 million smolts. The tribe wants to determine the extent and nature of adult hatchery chinook straying in the watershed and to what extent, if any, straying is affecting natural production.

Chinook Spawner Surveys in Lake Washington/ Green River Basins (Muckleshoot Tribe)

The objective of this project is to improve the estimation of chinook spawning in the Lake Washington and Green River basins. This provides improved estimates of true natural escapement, which leads to better estimates of return rates, rebuilding success and wild/hatchery interactions.

Development of New Methodology to Estimate Total Natural Coho Spawning Escapement in Strait of Juan de Fuca Streams (Makah Tribe and Lower Elwha Klallam Tribe)

The objective of this project is to develop a more accurate methodology for estimating coho spawner abundance within the Strait of Juan de Fuca region. This information will allow the design of a new spawning survey system that utilizes index reaches based upon habitat stratification. Project field work includes coho spawner surveys, habitat typing and smolt trapping.

Fishery Monitoring Projects

Monitoring and Sampling of Hood Canal Commercial Coho Fisheries (Skokomish Tribe)

The ESA listing of Hood Canal summer chum means management actions may be needed to protect these stocks in Canadian and U.S. fisheries. This project determines run timing and incidental summer chum harvests during Hood Canal coho fisheries to help managers more effectively regulate fisheries to protect summer chum.

Estimation of Port Gamble S'Klallam Tribal Coho Stocks to Treaty and Non-Treaty, U.S./Canada Fisheries (Port Gamble S'Klallam Tribe)

This study involves sampling coho salmon fisheries and spawning grounds within the Port Gamble Tribe's reservation. The purpose of the sampling is to collect biological data and recover coded wire tagged fish. The data will be used to determine the contribution of Port Gamble net pen coho and other Hood Canal coho stocks to U.S. and Canadian fisheries, assess the benefits of the tribe's net pen program and evaluate potential impacts on wild coho stocks within the region.

Comparison of Summer and Fall Chinook Broodstock Performance (Tulalip Tribes)

This study will compare the survival and fishery contribution rates of summer and fall chinook produced at the Bernie "Kai Kai" Gobin Hatchery through coded wire tagging of representative samples from both groups. This will enable the tribe to evaluate the probable success of switching the bulk of the hatchery's production from the fall stock to a more locally adapted summer group.

Habitat Improvement Projects

Stillaguamish Culvert Analysis and Repair (Stillaguamish Tribe)

The purpose of this project is to increase coho production in the Stillaguamish watershed by replacing salmon-blocking culverts. Previous work led to a prioritized list of projects. This year two additional projects were completed. The culvert repair work has largely been done in cooperation with other agencies and groups. Field activities include spawning surveys to evaluate utilization of the opened habitat and monitoring of completed culvert repairs.

For More Information

For more information about the natural resource management activities of the treaty Indian tribes in western Washington, contact the Northwest Indian Fisheries Commission, 6730 Martin Way E., Olympia, WA., 98516; or call (360) 438-1180. Visit the NWIFC home page at www.nwifc.wa.gov.